Expansion of National Grid

509. SHRI RAMDAS AGARWAL: Will the Minister of POWER be pleased to state:

(a) whether the Power Grid Corporation proposes to implement certain projects to expand the National Grid;

(b) if so, the details thereof and investment involved therein;

(c) the details of power transmission capacity which has already been established in the country till date;

(d) whether any projects have already been started to enhance inter-regional power transfer capacity by 2011-12; and

(e) if so, the details thereof?

THE MINISTER OF POWER (SHRI SUSHILKUMAR SHINDE): (a) and (b) Power Grid Corporation of India Ltd. (PGCIL), which has the mandate for development of inter-State and inter-regional Transmission Systems, has been undertaking implementation of various Transmission Systems throughout the country. A perspective transmission plan has been evolved for strengthening the regional grids as well as to increase the inter-regional power transfer capacity by development of a National Power Grid. A list of the generation linked transmission schemes and grid strengthening schemes which are under implementation/ planned by PGCIL during the 10th and 11th Plans, with their estimated cost, is given in the enclosed Statement-I.

PGCIL envisages an investment of around Rs. 18,000 crore during 10th Plan and Rs.40,000 crore during 11th Plan as per the present status of various generation projects.

(c) to (e) The present inter-regional transmission capacity is around 11,450 MW which is likely to increase to about 37000 MW by 2012. A Statement indicating the existing inter-regional links and the links planned for completion up to 2012, with their inter-regional power transfer capacity, is given in the enclosed Statement-II.

Statement-I

1. *Generation Linked Transmission Schemes (X Plan)*

Name of Project	Status of the Tr. System	Cost (Rs. Cr.)
THERMAL		
NTPC		
Vindhyachal-III (1000 MW)	Under Implementation (by 2006-07)	596
Kahalgaon-II, Ph-I (1000 MW)	Under Implementation (by 2006-07)	1772
Kahalgaon-II, Ph-II (500 MW)	Under Implementation (by 2006-07)	464
Sipat-I (1980 MW) (Gen coming up in XI Plan)	Under Implementation (by 2006-07)	1455
Sipat-II (1000 MW)	Under Implementation (by (2006-07)	602
HYDRO		
NHPC		
Teesta-V (510 MW)	Under Implementation (by 2007-08)	209
Tala HEP (1020 MW)	Nearing completion	2484

2. *Grid Strengthening Schemes (X Plan)*

Name of Project	Status of the Tr. System	Cost (Rs. Cr.)
1	2	3
Northern Region		
Series capacitors for Kanpur-Ballabhgarh-R&D	Under commissioning	4
SS scheme in Uttaranchal	Under Implementation (by (2007)	76
SS in Singrauli-Vindhyachal (Re-alignment of Singrauli-Vindhyachal Corridor)	Under Implementation (by 2007	17

1	2	3
SS in NR-II	Under Implementation (by 2007)	221
Western Region		
Vindhya chal-Korba TS	Under Implementation (by 2007)	164
Inter Regional Scheme		
SS scheme in NR-ER (formerly part of tala supplementary scheme)	Under implementation (by 2007)	391

1. *Generation Linked Transmission Schemes (XI Plan)*

Name of Project	Year of Benefit of the generation project (as per National Electricity Plan of CEA)	Cost (Rs. Cr.)
1	2	3
THERMAL		
NTPC		
Sipat-I(1980 MW)	2007-09	1455
Unchahaar-III (210 MW)	2006-07	73
Barh (1980 MW)	2008-11	3779
Kawas-II (1300 MW)	2007-08	381
Gandhar-II (1300MW)	2007-08	653
North Karanpura (1980 MW)	2011-12	4104
Kayamkulam-II (1950 MW)	2009-10	600
NLC		
Neyveli-TS-II Expn.	2008-10	692
HYDRO		
NHPC		
Koteshwar (400 MW)	2007-08	260
Sewa-II (120 MW)	2007-08	98
Parbati-II (800 MW)	2007-09	360
L. Subansiri (2000 MW)	2010-11	9484
Uri-II (240 MW)	2009-10	230

1	2	3
Parbati-III (520 MW)	2010-11	557
Chamera-III (231 MW)	2010-11	490
NEEPCO		
Kameng HEP (600 MW)	2009-10	-
NTPC		
Koldam HEP (800 MW)	2008-09	478
THDC		
Tehri PSS (1000 MW)	2009-10	1100
SJVNL		
Rampur (412 MW)	2010-11	250
Nuclear		
RAPP 5&6 (440 MW)	2007-09	499
Kaiga-3&4 (440)	2007-08	588
Kudankulam (2000 MW)	2007-09	1779
Kalpakkam PFBR (500 MW)	2011-12	100

2. *Grid Strengthening Schemes(XI Plan)*

Name of Project	Commissioning Schedule	Cost (Rs. Cr.)
1	2	3
Northern Region		
System Strengthening-VI in NR (Gurgaon S/Stn)	2008	170
NR-III, SS	2008	231
SS in NR-I	2008	272
Transformation Capacity in Moga & Amritsar	2008	47
System Strengthening in Rourkee Area	2009	110
System Strengthening V in NR	2010	721

1	2	3
NR System Strengthening-VII & VIII	2009	350
System Strengthening in East-West Corridor in NR	2009	120
Western Region		
WR SS-I	2008	199
WR SS-III	2008	76
Bina-Nagda Transmission system	2008	267
Sipat-II Supplementary scheme	2009	814
WR system Strengthening Scheme-IV:	2009	97
WRSS-II	2010	3581
WR SS-V	2009	450
WRSS VI	2012	2000
Eastern Region		
ER System Strengthening-I	2009	815
ER System Strengthening-II	2010	800
ER System Strengthening-III	2011	400
North-Eastern Region		
NER System Strengthening-I	2009	59
TS for Misa-Byrnihat Project	2009	150
Southern Region		
System Strengtheing in SR-VI	2008	114
System Strengthening in SR-III	2008	285
System Strengthening in SR-V	2008	92
Upgradation of transfer capacity of Talcher-Kolar HVDC bipole	2009	118
System Strengthening-VII	2010	279
2nd spare convertor transformers for Talcher-Kolar	2008	65
Inter-regional		
North-West Transmission System	2009	483
East-West Transmission System	2009	804
WR-SR HVDC link	2012	1000

Statement-II

National Grid—Details of Inter-Regional Transmission Capacities

Existing and Programmed for completion by End of 10th Plan (March, 2007):

Name of System	Existing Transmission Capacity (as on Oct, 06)	Additional Capacity under construction to be added during Nov, 06-Mar, 07)	Transmission Capacity at the end of 10th Plan (end of 2006-07)
1	2	3	4
ER-SR:			
Guzuwaka HVDC back-to-back	1000		1000
Balimela-Upper Sileru 220kV S/C	100		100
Talcher-Kolar HVDC bipole	2000		2000
ER-SR total	**3100**		**3100**
ER-NR:			
Mazaffarpur-Gorakhpur 400 kV D/C (Quad Moose) with series comp	2000		2000
Dehri-Sahupuri 220 kV S/C	100		100
Sasaram HVDC back-to-back	500		500
Biharsharif-Balia 400kV D/C quad increased loadability with series capacitor in associated lines in NR system		1600	1600
Patna—Balia 400kV D/C quad increased loadability with series capacitor in associated lines in NR system		1600	1600
ER-NR total	**2600**	**3200**	**3200**
ER-WR:			
Rourkela-Raipur 400 kV D/C (without SC)	1000		1000
TCSC on Rourkela-Raipur 400 kV D/C	400		400
Budhipadar-Korba 220 kV D/C+S/C	400		400
ER-WR total	**1800**		**1800**

1	2	3	4
ER-NER:			
Birpara-Salakati 220kV D/C	250		250
Malda-Bongaigaon 400 kV/DC	1000		1000
ER-NER total	**1250**		**1250**
NR-WR:			
Vindhyachal HVDC back-to-back	500		500
Auriya-Malanpur 220 KV D/C	250		250
Kota-Ujjain 220 KV D/C	250		250
Agra-Gwalior 765 kV S/C line-1 400kV op.		1100	1100
NR-WR total	**1000**	**1100**	**2100**
WR-SR:			
Chandrapur HVDC back-to-back	1000		1000
Barsur-L. Sileru 200kV HVDC monopole	200		200
Kolhapur-Belgaum 220kV D/C	250		250
Ponda-Nagajhari 220kV D/C	250		250
WR-SR total	**1700**		**1700**
TOTAL ALL INDIA (end of 10th Plan)	11450	4300	15750

National Grid—Details of Inter-Regional Transmission Capacities

Transmission Capacities for Addition during 11th Plan (2007-12):

Name of System	Additions during 11th Plan i.e. 2007-12	
1	2	
ER-SR:		
Upgradation of Talcher-Kolar HVDC bipole	500	
ER-SR total		**500**
ER-NR:		
Barh-Balia 400kV D/C quad increased loadability with series capacitor in associated lines in NR System	1600	
Sasaram-Fatehpur 765kV S/C (40%SC)	2300	
Sasaram-Balia 400kV D/C quad increased loadability with series capacitor in associated lines in NR System	1600	
ER-NR total		**5500**
ER-WR:		
Ranchi-Sipat 400kV D/C (40% SC)	1000	
Ranchi-Rourkela-Raipur 400 kV D/C	1400	
North Karanpura-Sipat 765kV S/C	2300	
ER-WR total		**4700**

1		2
ER-NER:		
Bongaigaon-Siliguri 400 kV D/C quad	1000	
ER-NER total		**1000**
NR-WR:		
Agra-Gwalior 765kV line-1 765 kV op	1200	
Agra-Gwalior 765kV line-2	2300	
Kankroli-Zerda 400 KV D/C	1000	
RAPP-Nagda 400 KV D/C	1000	
NR-WR total		**5500**
WR-SR:		
Parli-Raichur 400 kV D/C	1000	
WR-SR total		**1000**
NER-NR/WR:		
Bishwanath Chariyali-Agra HVDC bi-pole±800 kV	3000	
NER-NR/WR total		**3000**
TOTAL ALL INDIA (during 11th Plan)		21400

Steps to check power thefts

510. SHRI B.K. HARIPRASAD: Will the Minister of POWER be pleased to state:

(a) whether the power utilities in the country still face crippling losses due to power thefts which show no sign of abating and whether such losses work out to almost 35 per cent of the power produced;

(b) whether the Apex Court has, in a recent directive, called for exemplary fines and disconnection of power supply for such crimes against the public utilities; and

(c) what steps are being taken by Government to enforce the Apex Court's directives?

THE MINISTER OF POWER (SHRI SUSHILKUMAR SHINDE): (a) Government is aware of incidence of theft and pilferages in the electricity distribution, which indeed is a serious concern for the Government. However, since it was not possible to exactly assess the amount of theft in the system, the concept of Aggregate Technical and Commercial (AT&C) losses was introduced by the Ministry in 2001-02 to capture total losses, not only technical but also commercial including those on account of theft